

REMARKS

This Amendment is fully responsive to the final Office Action dated October 29, 2010, issued in connection with the above-identified application. Claims 16, 18, 19, 21 and 22 are pending in the present application. With this Amendment, no claims have been amended and no new matter has been introduced. Favorable reconsideration is respectfully requested.

In the Office Action, claims 16 and 22 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Shimada et al. (U.S. Patent No. 6,670,603, hereafter “Shimada”) in view of Kiyooki (Japanese Publication No. 2002-328428, hereafter “Kiyooki”), and further in view of Pate (U.S. Patent No. 7,187,343, hereafter “Pate”).

The Applicants assert that the above cited prior art fails to disclose or suggest at least the features of independent claim 16. Independent claim 16 recites *inter alia* the following features:

“[a] portable video projector for projecting video, comprising:...

a camera shake detection unit which detects an amount of camera shake of the portable video projector while being held by a user..., and

wherein said camera shake correction unit performs correction of the camera shake so that projecting positions of the laser lights of three colors including red, blue and green are not deviated when the video is projected, and said camera shake detection unit detects the camera shake amount from videos at four corners of an image that is shot by said camera device.”

(Emphasis added).

The present invention (as recited in independent claim 16) is distinguishable from the cited prior art in that a camera shake correction unit performs correction of the camera shake while a portable video projector is being held by a user so that projecting positions of the laser lights including three colors of red, blue and green are not deviated when a video is projected. Additionally, the camera shake detection unit detects the camera shake amount from videos at four corners of an image that is shot by the camera device of the video projector.

In the Office Action, although the Examiner relies on the combination of Shimada, Kiyooki and Pate for disclosing or suggesting all the features of independent claim 16, the Examiner relies specifically on Pate for disclosing or suggesting the feature of “the camera shake detection unit” recited in independent claim 16 (see Office Action, pg. 4).

The Examiner relies on col. 2, lines 2-3; col. 4, line 63; and col. 6, lines 6-7 and lines 17-22 of Pate for disclosing or suggesting the features of “the camera shake detection unit” recited in independent claim 16.

Pate in col. 2, lines 2-3 describes the display system illustrated in Fig. 1. As illustrated by Fig. 1 of Pate, a front-projection display system includes a projector or display device 12 adapted to produce a principal image 14 and a calibration image 16 on a display or viewing surface 18.

Additionally, Pate in col. 4, line 63 discloses that an optical unit may be located so as to minimize differences in a field of view and a displayed image, and the use of a beamsplitter in an optical pathway. Pate in col. 6, lines 6-7 discloses a calibration unit that includes an optical unit and a calibration light source for providing a calibration image. And, as described in col. 6, lines 17-22 of Pate, light passes through the beamsplitter and a portion of the light is directed to the optical unit in the calibration unit, wherein the calibration unit may be a camera or other color-sensing device.

As described in Pate, the principal image may be an image of any nature and displayed on the display surface in its intended form, such as with reasonable colors. The calibration image is an image that may have a known characteristic and may be used to provide feedback to the display system for use in modifying the projection of a principal image for improving the corresponding characteristics (i.e., colors) of the principal image. Additionally, as seen in Fig. 1, the display device (i.e., projector) appears to be stationary (i.e., not meant to be held).

Conversely, independent claim 16 recites the following:

“a camera shake detection unit which detects an amount of camera shake of the portable video projector while being held by a user..., and wherein said camera shake correction unit performs correction of the camera shake so that projecting positions of the laser lights of three colors including red, blue and green are not deviated when the video is projected, and said camera shake detection unit detects the camera shake amount from videos at four corners of an image that is shot by said camera device.” (Emphasis added).

With the present invention (as recited in independent claim 16), a camera shake correction unit performs correction of the camera shake while a portable video projector is being held by a user so that projecting positions of the laser lights including three colors of red, blue and green are not deviated when a video is projected. Additionally, the camera shake detection

unit detects the camera shake amount from videos at four corners of an image that is shot by the camera device of the video projector.

As noted above, the object of Pate is not to correct the camera shake amount but to compensate or calibrate color characteristics. In fact, nothing in Pate discloses or suggests that the display system illustrated in Fig. 1 can detect a camera shake amount, and given the display device (i.e., projector) appears to be stationary (i.e., not meant to be held), the issue of camera shake while being held by a user is not even considered by the teachings of the reference. Therefore, it is not possible to realize correcting the camera shake amount caused by being held by a user by only performing the color compensation or calibration of images captured using the system disclosed by Pate.

Accordingly, one of ordinary skill in the art would not be motivated to combine the compensation or calibration of color characteristics taught by Pate with that of Shimada and Kiyooki in an attempt to arrive at the features of the camera shake detection unit of present invention (as recited in independent claim 16).

Also, based on the deficiencies noted above in Pate, even if the combination of the references (i.e., as suggested by the Examiner) was made, the combination of Shimada Kiyooki and Pate fails to disclose or suggest all the features of the camera shake detection unit of the present invention (as recited in independent claim 16).

Finally, modifying or combining Shimada Kiyooki and Pate to include all the features of independent claim 16 would be based on improper hindsight reasoning. That is, “but for” the Applicants’ invention (as recited in independent claim 16), there is no suggestion or motivation in the prior art to include all the features of “camera shake detection unit” of the present invention (as recited in independent claim 16).

Based on the above discussion, no combination of Shimada Kiyooki and Pate would result in, or otherwise render obvious, all the features of independent claim 16. Likewise, no combination of Shimada Kiyooki and Pate would result in, or otherwise render obvious, claim 22 at least by virtue of its dependency from independent claim 16.

In the Office Action, claims 18, 19 and 21 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Shimada in view of Pate and Kiyooki, and further in view of Tanaka (U.S. Patent No. 5,479,236, hereafter “Tanaka”).

Claims 18, 19 and 21 depend (directly or indirectly) from independent claim 16. As noted above, Shimada, Kiyoaki and Pate fail to disclose or suggest all the features now recited in independent claim 16 (as amended). Additionally, Tanaka fails to overcome the deficiencies noted above in Shimada, Kiyoaki and Pate. Accordingly, no combination of Shimada, Kiyoaki and Pate with Tanaka would result in, or otherwise render obvious, claims 18, 19 and 21 at least by virtue of their dependencies from independent claim 16.

In light of the above, the Applicants submit that all the pending claims are patentable over the prior art of record. The Applicants respectfully request that the Examiner withdraw the rejections presented in the outstanding Office Action, and pass the present application to issue. The Examiner is requested to contact the undersigned attorney by telephone to resolve any issues remaining in the application.

Respectfully submitted,

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